

2. The method of claim 1 wherein:
said [semiconductor] device comprises silicon.

B2 6. (Amended) The method of claim 3 wherein said deuterium-enriched ambient is at superatmospheric pressure. [1 wherein said semiconductor device includes a plurality of active components.]

28. (Amended) A method for conditioning a [semiconductor] field effect transistor device to increase its resilience to hot carrier effects, comprising:
providing a field effect transistor device having conductive contacts for a source, drain and gate of the device;

B3 disposing atomic, molecular or ionic deuterium in an area of said device subject to hot carrier effects; and
heating said device.

29. (Amended) The method of claim 28 which comprises diffusing molecular deuterium to said one or more areas and heating said device. [in which said device includes at least one metal oxide semiconductor field effect transistor.]

30. (Amended) The method of claim 29 which includes subjecting said device to a deuterium gas-enriched atmosphere at a temperature of about 200°C to about 1000°C. [in which said device includes a plurality of metal oxide semiconductor field effect transistors.]

B4 32. (Amended) The method of claim 28 in which said device includes a silicon nitride layer, and wherein the method includes trapping [the] molecular deuterium within layers of the semiconductor device during fabrication.

40. (New) A method for making a silicon nitride spacer of a semiconductor device, comprising:

B5 fabricating a silicon nitride spacer of a semiconductor device by reacting an ammonia compound with a silane compound, wherein at least one of said compounds contains deuterium, so as to form a silicon nitride spacer containing deuterium.

²41. (New) The method of claim ¹~~40~~, wherein said fabricating includes reacting a compound of the formula $\text{ND}_{(n)}\text{H}_{(3-n)}$ wherein n is 1, 2 or 3, with a silane compound, so as to form a silicon nitride spacer containing deuterium.

³42. (New) The method of claim ¹~~40~~, wherein said silane compound contains deuterium.

⁴43. (New) The method of claim ³~~42~~, wherein said silane compound is encompassed by the formula $\text{SiD}_{(m)}\text{H}_{(4-m)}$ wherein m is 1, 2, 3 or 4,

⁵44. (New) The method of claim ³~~42~~, wherein said silane compound is encompassed by the formula



wherein: o is 1, 2, 3, 4, 5 or 6;

p is 0, 1, 2, 3, 4 or 5;

q is 0, 1, 2, 3, 4 or 5; and

X is halogen, with the proviso that $o + p + q = 6$.

⁶45. (New) The method of claim ¹~~40~~, comprising reacting ND_3 with SiD_4 to form the silicon nitride spacer.

⁷46. (New) The method of claim ¹~~40~~, comprising reacting ND_3 with SiCl_2D_2 to form the silicon nitride spacer.

47. (New) A method for obtaining a deuterium-passivated semiconductor device, comprising fabricating a deuterium-passivated semiconductor device, wherein said fabricating includes implanting atomic or ionic deuterium into said device, and heating said device.

48. (New) The method of claim 47, wherein said fabricating includes implanting atomic deuterium into said device and heating said device.

49. (New) The method of claim 47, wherein said fabricating includes implanting ionic deuterium into said device, and heating said device.